Economics

Model of prices and trade

(1)

P Price

D Desirability of the item, the person’s interest in that particular item

V Volume, the number of the items currently held

General equation

Model

(2)

S Satisfaction, parameter that indicates whether the person would chose to proceed with a transaction

(y if increased)

α Scaling factor for practical situations

(3)

Price of asset X in terms of the number of items of asset Y that it would be exchanged for

(4)

Price of asset X in dollars.

(5)

N(Pb, inf)

Price of actual trade:

economic, game thry, reg etc.

P = (Pa + Pb) / 2 \* c + 5 \* Pa \* Mb \* (1-c). (6

c competition, 1 = high

Mb many buyers, 1 = true, 0 = false

5 arbitrary multiple

ia information availability/transparency, rand spread around other side price

c competition, 1 = many buys/sellers economic. price, 0 = 1 buyer/many sellers (0 price), 1 sellers/many buy. (price up)

(7)

Ep = E x (1-tf)

E Work effort

t length of time

P productivity of production of asset x

c rate of consumption

d rate of depreciation due to age

m consumed in the manufacturing of some other asset or in primary production

tx tax applicable

not calculable, for explanation of the prev.

x = ay + bz + ck + pE (8

a, b, c amounts of inputs required

y, z, k supply inputs

p multiple of effort

E effort

changes

x +

y -

z -

k –

Consumption

Due to living, consumed in producing other items, consumed in transporting goods etc.

Depreciation

Constant, %.x V etc.

V = V – V \* tx + ∑t / n (9

Tax system,

tx tax rate

∑t total tax collected

n number of citizens

example formula only, others could be used

The model produces a price for each item, which is different for each person.

In a basic situation, it may be assumed that if price A is higher than price B, the first person would be a buyer of the goods and the second a seller, and a trade would be conducted.

E.g.

D 14

V 10

Cashd 5

CashV 12000

**P $3.19**

economics price model, eq. 7, 8.

7.

Pt = Pb \* (1-v) (10a.

Pt Probabiliy that a transaction will occur

Bf Beneficial flag, 0 if outside trading range, 1 if within it

v Level of violc., 0 to 1

8.

Prt = tf (10b.

Prt Probability of a random transfer between two people

tf Level of tft. 0 to 1

9.

//Ep = E x (1 - eb - et)

//eb weighting given to battle (commercial competition etc.)

(1 - eb - et) weighting given to production

//10.

//V = V + Vp + Vb - Vl

//Vp volume of goods produced

//Vb volume of goods aquired during battle

//Vl volume of goods lost during battle

11.

E = 1 / S

Total work activity = 1/S

production

// x = ay + bz + ck + pE

a, b, c amounts of inputs required

y, z, k supply inputs

p multiple of effort

E effort

changes

x +

y -

z -

k –

eqn. 14

E = 1 / U

next step in iteration

v prob of trans going ahead, 1 to 0

t random transfer of phys. assets

ia information availability/transparency, rand spread around other side price

c competition, 1 = many buys/sellers economic. price, 0 = 1 buyer/many

sellers (0 price), 1 sellers/many buy. (price up)

t tax

W work effort

Competition=1 all parties produce, sell, buy the items

Competition=0 1 producer/seller

1 buyer

pricing

mid-point econ. price

gm thry

buyer/many sellers (price 0)

seller/many buyers price high

**salaries**

effort

start of each time period for each person

if e < 100 then

e = 100

d = 1000 ‘ strong incentive against work due to stress, effort and physical cost

treated the same as another commodity that is an input to manufacturing etc.

wage rate = e / p

separate eqn.

work effort desire higher in cold climates due to the need to stay warm.

Npv of projects

Notes

Project

Fin cost

Produced items, cons items

Assets

Cash cost

Cash income, depreciation per period

Appendix 1.

Economic production requires

Transport systems (by road , rail, sea, air)

communication systems (postal mail, telephones)

A commercial law system or effective traditions for business transactions

Lack of laws banning various activities necessary for business production

Sec. B.

To avoid insanity and hell, implement several pegs and allow the system to rebalance to those.

e.g. hamburger economic cost 1c, set price = $4. Tea cost = 1c, set price = $2, implement 1% tax on bank balances.

(may require updating social security rates)

This is analogous to several poles holding up a tent canvas, to free allow movement without being hampered.